

## **Phase I Pond Management Plan**

### **Background**

A visual inspection of the Phase I Pond by EPA and NDEP on March 2, 2015, which indicated that approximately four feet of mineral salt precipitates had accumulated beneath the pond surface, and subsequent observations of the pond surface by Site O&M personnel indicating that the pond surface has crusted over has resulted in the development of this Phase I Pond Management Plan (Plan). These conditions preclude the pumping of solutions from the Phase I Pond to the Fluid Management System (FMS) Evaporation Ponds B and C due to a lack of fluid depth and associated insufficient suction head. In the past, solutions from this pond were regularly transferred to the FMS Evaporation Ponds to manage the low drain-down rate (now < 0.5 gpm). During the EPA/NDEP site visit, several alternatives were discussed to potentially extend the life the Phase 1 Pond.

### **Phase I Pond Management Plan**

This Plan to continue fluid management activities for the drain -down that currently accumulates in the Phase I Pond was developed to: 1) be consistent with ongoing operational and maintenance (O&M) practices for the Arimetco FMS; and 2) includes the placement of a dike made of zeolite-filled bags on the surface of the liner within the existing channel immediately above the Phase I Pond to form a sump. This approach is similar to operations currently used at the Slot Pond and previously employed at the VLT Pond. The Slot Pond operation forms a temporary pool above the sediment pond for the purpose of performing fluid flow measurements, and utilizes a temporary dike composed of bagged zeolite to form an in-channel reservoir with a V-Notch overflow weir.

The sump created at the Phase I Pond will host a submersible float -activated pump to transfer solutions to a temporary 250 -gallon holding tank via a 0.75 -inch diameter pipeline. The in-channel pump would be a float activated submersible 1/3 horsepower Grundfos KP 250 pump powered by a portable gas generator (this model pump is currently used at the Site in the leak detector sumps at the VLT and Slot Ponds). This pump would transfer the solutions via a 0.75 -inch pipeline to a 250 -gallon temporary holding tank located on the existing Phase I Pond Pump Pad. Once the 250-gallon polyethylene tank becomes filled to a specified level, a 0.5 HP Grundfos pump would be used to transfer the solutions via a 1 -inch pipeline to the existing 6 -inch pipeline that currently conveys solutions to the FMS Evaporation Ponds. This approach is not a permanent modification to the FMS, and would: 1) allow a 25-year/24-hour storm event to overflow the in -channel dike and flow passively into the existing Phase I Pond; and 2) facilitate operational adjustments to improve performance, as needed. The operation as described above would be conducted Monday through Friday during normal work hours and, as needed, the pumps can be removed daily and/or at the end of the work week (this system would not run over weekends and holidays). Additional operational and health and safety considerations would be incorporated once this plan is approved for implementation.